STIC Search Report
EIC 2800

STIC Database Tracking Number: 179678

TO: Joshua Zimmerman **Location: JEFF 9D64** **Art Unit: 2854** **Friday, February 24, 2006** **Case Serial Number: 10/523699**	**From: Michael Obinna** **Location: STIC-EIC2800** **Jefferson Building RM 4A58** **Phone: 571-272-2663** **Email: michael.obinna@uspto.gov**

Search Notes

RE: **Method and device for feeding dampening water in offset printing press**

Examiner Zimmerman,

Attached are edited search results from the patent and non-patent databases.

The tagged items are some of the results worth your review. However, I recommend that you browse all the results.

If you would like more searching to be done on this case, or if you have questions or comments, please do not hesitate to contact me.

Respectfully,

Michael Obinna

2/24/2006 1:58:06 PM
2/24/2006 2:19:26 PM

[File 344] Chinese Patents Abs Jan 1985-2006/Jan
[File 347] JAPIO Nov 1976-2005/Sep(Updated 060103)
[File 350] Derwent WPIX 1963-2006/UD,UM &UP=200607
[File 371] French Patents 1961-2002/BOPI 200209

Set	Items	Description
S1	1065634	S (OFFSET OR DI? ? OR DIGITAL()IMAG?????)(3N)(PRINT????? OR PRESS???? OR LITHOGRAPH?????) OR PRINT???????? OR LITHOGRAPH??????? OR PHOTOLITHOGRAP????? OR RIGHT()READ???? OR DIGITAL(3N)PRINT????
S2	90210	S (DAMP?????????? OR WET OR WETTING OR HUMID???? OR MOISTEN????? OR SATURAT???? OR SOAK????)(3N)(SOLUTION? ? OR MIX??? OR MIXTURE? ? OR BLEND???? OR DISSOLVENT? ? OR SUSPENSION OR WATER OR FLUID????? OR EMULSION? ? OR COMPOUND? ? OR ETCHANT? ? OR FOUNT????) OR ETCHANT? ? OR FOUNT????
S3	400525	S (DETECT???? OR SENS????? OR VERIF???????? OR DIAG??????? OR MONITOR?????)(3N)(VISCOSITY OR SURFACE(3N)TENSION???? OR CAPILLAR??????) OR VISCOSITY OR SURFACE(3N)TENSION????? OR CAPILLAR?????? OR GLUTINOUS?????? OR VISCID????? OR CONSISTEN?????? OR (LIQUID???? OR FLUID)(3N)FRICTION????? OR VISCO???????
S4	4657991	S TEMPERATURE? ? OR TEMP? ? OR HEAT????? OR THERMAL???? OR DEGREE? ? OR HOTNESS OR AMBIEN????
S5	3992227	S WATER OR H2O OR FLUID??? OR LIQUID???? OR (SURFAC???? OR VISCOS????? OR CAPILLAR???? OR SURFACE()TENSION????)(3N)(AGENT OR MEANS OR MEDI??)
S6	1688264	S PH? ? OR PH? ? OR (PH? ? OR PH? ?)()(VALUE OR NUMBER OR CONSTANT? ?) OR POTEN?????? (2N)HYDROGEN OR (ION OR ACID???? OR ALKALIN????)(3N)CONCENTRATE????? OR ACID???? OR ALKALIN???????
S7	4147035	S TANK??? OR RESERVOIR? ? OR REPOSITOR??? OR CONTAIN???? OR RECEPTACLE? ?
S8	412077	S (MEASUR???? OR ADDING OR SUPPLY???? OR PH? ? OR METER???? OR TEST???? OR COMPAR????)(3N)(UNIT? ? OR ASSEMBL????? OR MODUL???? OR COMPONENT? ? OR PART??? OR PIEC???? OR ELEMENT????)
S9	5327	S IC=(B41F-007/00 OR B41F-007/24 OR B41F-007/32 OR B41N-003/00 OR B41L-025/00 OR C02B-001/30 OR G05D-021/00 OR G05D-022/00 OR B01D-029/42)
S10	11929	S MC=(S06-C03 OR X25-H03)
S11	4	S S1 AND S2 AND S3 AND S4 AND S5 AND S6 AND S7 AND S8
S12	3	S S11 AND PY<=2002
S13	693	S S1 AND S2 AND S3
S14	14	S S13 AND S7 AND S8
S15	11	S S14 AND PY<=2002
S16	22	S S13 AND S9
S17	2	S S16 AND S10
S18	2811	S S1 AND S3 AND S4 AND S5 AND S6
S19	10	S S18 AND S9
S20	1	S S19 AND S10
S21	7	S S19 AND PY<=2002
S22	2	S S17 NOT S12
S23	0	S S20 NOT (S12 OR S17)
S24	7	S S21 NOT (S12 OR S17 OR S20)
S25	8	S S15 NOT (S12 OR S17 OR S20 OR S21)

24/9/2 (Item 2 from file: 347) **Links**
JAPIO

01197239 **SOLUTION FOR CORRECTING SILVER SALT LITHOGRAPHIC PLATE**

Pub. No.: 58-134639 [JP 58134639 A]
Published: August 10, 1983 (**19830810**)
Inventor: UCHIDA TAKU
SAKAMOTO HIDEKAZU
ITO NOBORU
Applicant: KONISHIROKU PHOTO IND CO LTD [000127] (A Japanese Company or Corporation), JP (Japan)
Application No.: 57-016764 [JP 8216764]
Filed: February 03, 1982 (19820203)
International Class: [3] G03F-007/02; **B41N-003/00**; G03F-007/00; G03F-007/06
JAPIO Class: 29.1 (PRECISION INSTRUMENTS -- Photography & Cinematography); 13.2 (INORGANIC CHEMISTRY -- Inorganic Compounds); 29.4 (PRECISION INSTRUMENTS -- Business Machines)
Journal: Section: P, Section No. 234, Vol. 07, No. 249, Pg. 133, November 05, 1983 (19831105)

ABSTRACT
PURPOSE: To correct the image of a silver salt **lithographic** plate rapidly and exactly, and to obtain a correcting solution superior in **printing** resistance of the corrected image, effective after oleophilicness giving treatment, and storable for a long term, by adding iodine or an inorganic iodine compound

CONSTITUTION: A **viscosity** raising **agent**, such as carboxymethyl cellulose, is added, when needed, to an aqueous solution of iodine or an inorganic iodine compound such as KI, NaI, or ZnI(sub 2) in order to prevent spreading of a correcting solution beyond a place necessary for correction. The correction solution thus prepared may contain dye or pigment when needed, and in addition, glycerin, glycol, or a **pH** controller. As a result, correction effect does not depend on correction **temperatures**, an image can be corrected rapidly and exactly, and the correction solution is retained effective for correction even after oleophilicness giving treatment. The corrected **printing** plate is good in **printing** resistance.

Not in Dampening Soln

Maybe

24/9/4 (Item 2 from file: 350) **Links**
Derwent WPIX

015702764
WPI Acc No: 2003-764957/**200372**
XRAM Acc No: C03-209925
XRPX Acc No: N03-612670

Method for dampening lithographic plate, involves applying dampening solution containing aqueous solution of corn hull-derived hemicellulose, to non-image area

Patent Assignee: ANTRIM R L (ANTR-I); BISHOP L E (BISH-I); MCPHERSON R E (MCPH-I); GRAIN PROCESSING CORP (GRAI)
Inventor: ANTRIM R L; BISHOP L E; MCPHERSON R E
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020100383	A1	20020801	US 2000726092	A	20001129	200372	B
US 6488754	B2	20021203	US 2000726092	A	20001129	200372	

Priority Applications (No Type Date): US 2000726092 A 20001129
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020100383	A1		12	B41F-001/18	
US 6488754	B2			B41N-003/08	

Abstract (Basic): US 20020100383 A1

NOVELTY - A dampening method involves applying a dampening solution containing an aqueous solution of a corn hull-derived hemicellulose, to at least the non-image area of the **lithographic** plate. The hemicellulose is present in the solution in an amount effective to provide sufficient film formability to enhance the ink repellency of the non-image area.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a dampening solution which contains **water**, enzyme digestion product of a hemicellulose, and a wetting agent. The digestion product is present in an amount effective to provide sufficient film-formability to enhance the ink repellency of the solution, and the wetting agent is present in an amount effective to enhance the wettability of the dampening solution.

USE - For dampening **lithographic printing** plate, deep-edge plate, multi-layer metallic plate, direct-drawing master and **lithographic printing** plate for electrophotography.

ADVANTAGE - The method uses a dampening solution which is applicable to any kind of **printing** plate. The hemicellulose present in the dampening solution has a steady and reliable commercial availability. The enzyme reduces the average molecular size of the xylose polymers in hemicellulose to cause the digestion product to interact more successfully with the **lithographic printing** plate surface to form a hydrophilic surface which repels hydrophobic **lithographic** ink. The preservative retards the growth of

microorganism, such as bacteria, fungi and yeast. The anti-foaming agent retards foaming of the composition.

pp; 12 DwgNo 0/0

Technology Focus:

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The dampening solution contains (in weight%) hemicellulose (0.1-35, preferably 0.1-5), digestion product (0.1-35, preferably 0.1-5), a preservative in an amount effective to impart a preserving effect and an anti-foaming agent in an amount effective to retard foaming. The digestion product is treated using hydrogen peroxide as bleach, after enzyme digestion.

Extension Abstract:

EXAMPLE - Corn hull hemicellulose (in g) (147) was dissolved in **water** (1953 ml) at 57degreesC. The **pH** was adjusted to 4.91 with 5.8N hydrochloric **acid**. Genecor Enzyme GC-140 xylanase enzyme (12.1) was added to form an enzyme system, and was maintained by stirring for 24 hours. The enzyme was then inactivated by raising the **pH** to 7.99 with 50% sodium hydroxide and boiling. The **temperature** was then lowered to 75degreesC and **pH** was raised to 11.67. The **temperature** was raised to 88degreesC and the system was gently agitated for 2 hours. The system was then filtered, **temperature** was lowered to 75degreesC and **pH** was lowered to 3.95 with 11.6N hydrochloric **acid**. The final product was a light tan-colored syrup having a **viscosity** of 47 cP at 25degreesC. The original cellulose, the product after xylanase digestion and product after xylanase digestion and hydrogen peroxide treatment had a molecular weight of 236900, 107500 and 96100, respectively. A dampening solution was prepared by diluting the obtained final product (133) with tap **water** (3655 ml) containing acetic **acid** (4 ml). The dampening solution had a **pH** of 3.9 and a conductivity of 1436 mhos/cm at 25degreesC. The obtained dampening solution had a solid ink density of 1.06, a max dot gain of 23.9, a contrast resolution index of 4.42 and a **print** contrast of 28.6.

Title Terms: METHOD; DAMP; LITHO; PLATE; APPLY; DAMP; SOLUTION; CONTAIN; AQUEOUS; SOLUTION; CORN; HULL; DERIVATIVE; HEMICELLULOSE; NON; IMAGE; AREA

Derwent Class: A97; G05; P74; P75

International Patent Class (Main): B41F-001/18; B41N-003/08

International Patent Class (Additional): **B41F-007/00**; C09D-010/00

File Segment: CPI; EngPI

Manual Codes (CPI/A-N): A03-A05; A11-B05D; A12-W07F; G05-A01

25/9/1 (Item 1 from file: 347) **Links**
JAPIO

04108132 **Image available**
DYNAMIC SURFACE TENSION MEASURING DEVICE

Pub. No.: 05-099832 [JP 5099832 A]
Published: April 23, 1993 (**19930423**)
Inventor: TAKASE MASUMI
HAYAKAWA MIZUKADO
SHIMOKAWA HIDEAKI
Applicant: TOYO INK MFG CO LTD [352425] (A Japanese Company or Corporation), JP (Japan)
Application No.: 03-283908 [JP 91283908]
Filed: October 04, 1991 (19911004)
International Class: [5] G01N-013/02
JAPIO Class: 46.2 (INSTRUMENTATION -- Testing); 29.4 (PRECISION INSTRUMENTS -- Business Machines)
JAPIO Keyword: R002 (LASERS)
Journal: Section: P, Section No. 1593, Vol. 17, No. 445, Pg. 158, August 16, 1993 (19930816)

ABSTRACT
PURPOSE: To obtain a device which can measure a dynamic **surface tension** of a liquid substance such as a liquid which **contains** a surface activated substance, a **damping water** in an **offset printing**, and a paint.

CONSTITUTION: A measuring device consists of a dynamic **surface tension measuring** sample formation **part** A which consists of a reserve **tank** 1 of a sample liquid 1', determination pumps 2 and 2', an injection nozzle 3, a catch pan, and a circulation device part of liquid to the reserve **tank** 1, a **measuring part** B which **measures** a waveform of a standing wave which is created by a dynamic **surface tension measuring** sample formation **part** , and an analysis part C which analyzes a data which is measured by a measuring device which measures an outer diameter of a standing wave of a target by scanning in a direction of a constant axis by a laser light source.

25/9/3 (Item 2 from file: 350) **Links**

012153503 **Image available**
WPI Acc No: 1998-570415/**199849**
XRPX Acc No: N98-443978

Processing method of fountain solutions used in offset printing - involves oxygen@ contained in compressed air being added to water to modify its surface tension and to improve its viscosity Thereby use of isopropyl alcohol can be avoided

Patent Assignee: RUPRECHT HANDELS AG (RUPR-N); ZOLLIKOFER AG (ZOLL-N)
Inventor: HUG T; RUPRECHT D
Number of Countries: 025 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 876910	A1	19981111	EP 98810354	A	19980422	199849	B

Priority Applications (No Type Date): EP 97810275 A 19970501
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 876910	A1	E	13	B41F-007/32	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

Abstract (Basic): EP 876910 A

The method comprises oxygen or oxygen **contained** in the air being added to the **water** to improve its **wetting** properties by modifying the **surface tension** and enhancing its **viscosity**. The air in fine distribution is blown through the water **containing** a **fountain** solution concentrate.

The device comprises damping unit (5) including a scoop roller (10) in a **fountain** solution **tank** (11) having a water conduit (24) is arranged ahead of the inking unit (4). The **fountain** solution **tank** (11) is provided with an oxygen or oxygen **containing** air **supply unit** (15; 26, 27; 32). The air **supply unit** (15) includes a linkage of bars (16) connected to a hose (17) for compressed air which linkage of bars is connected to a certain number of dipping tubes (18).

ADVANTAGE - Provides improved wetting properties.

Dwg.2/10

Title Terms: PROCESS; METHOD; **FOUNTAIN**; SOLUTION; OFFSET; **PRINT**; OXYGEN; **CONTAIN**; COMPRESS; AIR; ADD; WATER; MODIFIED ; SURFACE; TENSION; IMPROVE; **VISCOSITY**; ISOPROPYL; ALCOHOL; CAN; AVOID
Derwent Class: P74
International Patent Class (Main): B41F-007/32
International Patent Class (Additional): B41F-007/24
File Segment: EngPI

25/9/5 (Item 4 from file: 350) **Links**
Derwent WPIX

004531948
WPI Acc No: 1986-035292/**198605**
Related WPI Acc No: 1985-282693
XRAM Acc No: C86-014962
XRPX Acc No: N86-025688

Fountain solns. for lithographic printing - made by diluting concentrate contg. water, polyol, surfactant and poly-carboxylic acid-organic amine buffer salt

Patent Assignee: INMONT CORP (INMO)
Inventor: THIEBAUT B A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 4563952	A	19860114	US 85693541	A	19850122	198605	B

Priority Applications (No Type Date): US 85693541 A 19850122; US 83597798 A 19831221
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4563952	A		5		

Abstract (Basic): US 4563952 A

Web **offset** and **lithographic printing** are carried out using a **fountain** soln. obtd. by mixing 1-6wt.% water-dilutable **fountain** soln. concentrate with water and applying the resulting soln. to a planographic **printing** plate to render the non-image areas hydrophilic. The improved **fountain** soln. concentrate comprises water, a polyol, surfactant and a buffer consisting of at least one salt of (a) a polycarboxylic acid with a pKa of 3-6; and (b) an organic amine with a pKb of 2-9. The **fountain** soln. has pH 4.7-5.3, a **surface tension** of 32-52 x 10 power(-3) Newton/m and sufficient buffer effect such that the pH variation will be less than ca. 1 **pH unit** when 5 cc N/10 HCl is added to 100 cc of the **fountain** soln.

ADVANTAGE - The strongly buffered **fountain** soln. **contains** no alcohol or drastically reduced amts. of alcohol, and gives longer press runs, decreased scumming, decreased ink/water emulsification, decreased linting and defibration, decreased substrate breakage, improved drying, decreased strike-in and improved ink/water balance.

Title Terms: **FOUNTAIN**; SOLUTION; LITHO; **PRINT**; MADE; DILUTE; CONCENTRATE; **CONTAIN**; WATER; POLY; OL; SURFACTANT; POLY; CARBOXYLIC; ACID; ORGANIC; AMINE; BUFFER; SALT
Derwent Class: A97; E19; G02; P75

25/9/8 (Item 7 from file: 350) **Links**
Derwent WPIX

003885086
WPI Acc No: 1984-030627/**198406**
XRPX Acc No: N84-023129
Liq.-delivery mechanism to press - has separate drive mechanism for transfer and application rollers with press stopped

Patent Assignee: MAN MASCHFAB AUGSBURG-NUERNBERG (MAUG)
Inventor: HUMMEL P; REBEL H
Number of Countries: 003 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 3221514	A	19840202	DE 3221514	A	19820607	198406	B
GB 2127743	A	19840418	GB 8315647	A	19830607	198416	
GB 2127743	B	19850911				198537	
DE 3221514	C	19860123				198605	
US 4567823	A	19860204	US 84649228	A	19840910	198608	

Priority Applications (No Type Date): DE 3221514 A 19820607
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 3221514	A		13		

Abstract (Basic): GB 2127743 A

A multi-colour rotary **printing** press including means comprising applicator and **fountain** rollers for the application of a liquid to a **printing** unit cylinder, to which the liquid is supplied from a liquid **tank** partially by rollers driven by a **printing** press drive and partially by rollers driven by a separate drive, and including means for throwing the applicator and **fountain** roller on and off wherein the separate drive is provided additionally with transmission components via which a transfer roller and the applicator roller can be driven when the press has been stopped, and wherein the means for throwing the applicator and **fountain** rollers on and off can be operated in such a way that all of the applicator, transfer, **fountain** and optionally a metering roller can remain in contact or can be separated from each other when the applicator roller is thrown off and enabling the applicator roller to be thrown on and off whenever the associated plate cylinder impression is thrown on or off.

DE 3221514 A

The mechanism delivers liqs. onto the **printing** cylinder of a multi-colour **printing** press and from a vessel via rollers driven partly by the press and partly by a separate mechanism. Means for cutting the application and ink-vessel rollers in and out are included.

The separate drive mechanism (6) also has a transmission (8, 8.1 - 8.6) by which a transfer roller (2) and the application roller (1) can be driven with the press stopped. The systems for cutting the rollers (1, 3) in and out are so arranged that, with the application roller cut out, either all rollers (1-4) remain in contact or are partly separated from each other as desired. The application roller can be cut in and out when its respective plate cylinder (5) is cut in or out.

.4/4

Abstract (Equivalent): GB 2127743 B

A multi-colour rotary **printing** press including means comprising applicator and **fountain** rollers for the application of a liquid to a **printing** unit cylinder, to which the liquid is supplied from a liquid **tank** partially by rollers driven by a **printing** press drive and partially by rollers driven by a separate drive, and including means for throwing the applicator and **fountain** roller on and off wherein the separate drive is provided additionally with transmission components via which a transfer roller and the applicator roller can be driven when the press has been stopped, and wherein the means for throwing the applicator and **fountain** rollers on and off can be operated in such a way that all of the applicator, transfer, **fountain** and optionally a metering roller can remain in contact or can be separated from each other when the applicator roller is thrown off and enabling the applicator roller to be thrown on and off whenever the associated plate cylinder impression is thrown on or off.

Abstract (Equivalent): US 4567823 A

The rotary **printing** press **dampening** unit has a **fountain** roller (13) feeding a transfer roller (15) and an applicator roller (16) which are driven by the press drive. When the dampening unit is used as a varnishing unit, clutches are enabled and disabled so that the transfer roller is driven by a separate drive which rotates the **fountain** roller.

The applicator roller is selectively thrown off by pneumatic actuators (32,35) in such a way that all the rollers are connected to each other and can be driven by the separate drive. A third position is also defined where the applicator roller is also selectively thrown off 5/10mm from the transfer roller.

ADVANTAGE - The dampening **unit** can also **supply** a varnish having an arbitrary **viscosity**.

(7pp

Title Terms: LIQUID; DELIVER; MECHANISM; PRESS; SEPARATE; DRIVE; MECHANISM; TRANSFER; APPLY; ROLL; PRESS; STOP

Derwent Class: P74; P75

International Patent Class (Additional): B41F-007/26; B41F-031/30; B41L-025/16

File Segment: EngPI

2/24/2006 12:23:53 PM
2/24/2006 12:52:57 PM

[File 2] INSPEC 1898-2006/Jan W3
[File 6] NTIS 1964-2006/Jan W5
[File 8] Ei Compendex(R) 1970-2006/Jan W5
[File 34] SciSearch(R) Cited Ref Sci 1990-2006/Feb W1
[File 434] SciSearch(R) Cited Ref Sci 1974-1989/Dec
[File 35] Dissertation Abs Online 1861-2006/Jan
[File 65] Inside Conferences 1993-2006/Feb W1
[File 94] JICST-EPlus 1985-2006/Nov W4
[File 99] Wilson Appl. Sci & Tech Abs 1983-2006/Jan
[File 144] Pascal 1973-2006/Jan W3
[File 23] CSA Technology Research Database 1963-2006/Jan
[File 103] Energy SciTec 1974-2006/Jan B2
[File 96] FLUIDEX 1972-2006/Feb
[File 95] TEME-Technology & Management 1989-2006/Feb W1
[File 248] PIRA 1975-2006/Jan W3
[File 56] Computer and Information Systems Abstracts 1966-2006/Jan
[File 60] ANTE: Abstracts in New Tech & Engineer 1966-2006/Jan
[File 293] Engineered Materials Abstracts 1966-2006/Jan
[File 239] Mathsci 1940-2006/Mar
[File 256] TECINFOSOURCE 82-2005/DEC

Set	Items	Description
S1	748209	S (OFFSET OR DI? ? OR DIGITAL()IMAG?????)(3N)(PRINT????? OR PRESS???? OR LITHOGRAPH?????) OR PRINT???????? OR LITHOGRAPH??????? OR PHOTOLITHOGRAP????? OR RIGHT()READ???? OR DIGITAL(3N)PRINT????
S2	250659	S (DAMP?????????? OR WET OR WETTING OR HUMID???? OR MOISTEN????? OR SATURAT???? OR SOAK????)(3N)(SOLUTION? ? OR MIX??? OR MIXTURE? ? OR BLEND???? OR DISSOLVENT? ? OR SUSPENSION OR WATER OR FLUID????? OR EMULSION? ? OR COMPOUND? ? OR ETCHANT? ? OR FOUNT????) OR ETCHANT? ? OR FOUNT????
S3	2873478	S (DETECT???? OR SENS????? OR VERIF???????? OR DIAG??????? OR MONITOR?????)(3N)(VISCOSITY OR SURFACE(3N)TENSION???? OR CAPILLAR??????) OR VISCOSITY OR SURFACE(3N)TENSION????? OR CAPILLAR?????? OR GLUTINOUS?????? OR VISCID????? OR CONSISTEN?????? OR (LIQUID???? OR FLUID)(3N)FRICTION????? OR VISCO???????
S4	14906579	S TEMPERATURE? ? OR TEMP? ? OR HEAT????? OR THERMAL???? OR DEGREE? ? OR HOTNESS OR AMBIEN????
S5	9416802	S WATER OR H2O OR FLUID??? OR LIQUID???? OR (SURFAC???? OR VISCOS????? OR CAPILLAR???? OR SURFACE()TENSION????)(3N)(AGENT OR MEANS OR MEDI??)
S6	5478490	S PH? ? OR PH? ? OR (PH? ? OR PH? ?)()(VALUE OR NUMBER OR CONSTANT? ?) OR POTEN?????? (2N)HYDROGEN OR (ION OR ACID???? OR ALKALIN????)(3N)CONCENTRATE????? OR ACID???? OR ALKALIN???????
S7	5000769	S TANK??? OR RESERVOIR? ? OR REPOSITOR??? OR CONTAIN???? OR RECEPTACLE? ?
S8	579814	S (MEASUR???? OR ADDING OR SUPPLY???? OR PH? ? OR METER???? OR TEST???? OR COMPAR????)(3N)(UNIT? ? OR ASSEMBL????? OR MODUL???? OR COMPONENT? ? OR PART??? OR PIEC???? OR ELEMENT????)
S9	0	S S1 AND S2 AND S3 AND S4 AND S5 AND S6 AND S7 AND S8
S10	551	S S1 AND S2 AND S3
S11	375	S S10 AND S5
S12	104	S S11 AND S4
S13	22	S S12 AND S6
S14	3	S S13 AND S7
S15	3	RD (unique items)
S16	7	S S10 AND S8
S17	6	RD (unique items)
S18	5	S S17 AND PY<=2002
S19	7	S S1 AND S2 AND S7 AND S8
S20	6	RD (unique items)
S21	4	S S20 AND PY<=2002

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2/24/2006 12:52:57 PM

S22	19794	S S2 AND S3 AND S5
S23	1697	S S22 AND S6
S24	17	S S23 AND S7 AND S8
S25	0	S S24 AND (VALVE? ? OR CONDUIT? ?)
S26	8	S S24 AND S4
S27	5	RD (unique items)
S28	6	S S17 NOT S15
S29	4	S S21 NOT (S15 OR S17)
S30	5	S S27 NOT (S15 OR S17 OR S21)
S31	18	S S13 NOT (S15 OR S17 OR S21 OR S27)
S32	18	RD (unique items)
S33	16	S S32 AND PY<=2002
S34	12	S S24 NOT (S13 OR S15 OR S17 OR S21 OR S27)
S35	7	RD (unique items)
S36	6	S S35 AND PY<=2002

15/9/3 (Item 1 from file: 248) Links
Fulltext available through: USPTO Full Text Retrieval Options
PIRA

00235642 **Pira Accession Number:** 10088179 **Pira Abstract Numbers:** 08-91-PT04138
Title: FOUNTS - A TECHNOLOGICAL UPDATE
Authors: Gardner G
Source: Ink Print vol. 9, 1991, pp 8, 10, 11
ISSN: 0263-497X
Publication Year: 1991
Document Type: Journal Article
Language: English
Pira Subfiles: Printing and Publishing (PP); Printing Abstracts (PT)
Journal Announcement: 9112
Abstract: Fountain solutions should offer fast **wetting**, thin films that permit controlled **water** take up by ink, stable ink/ **water** emulsion, good release, wide **pH** tolerance, no corrosion, reduced piling and linting, safe handling, and assist rapid start-up with low waste. **Fountain** solutions may **contain** complexing agents to deactivate hard **water** salts. Buffering agents are added to stabilise **pH**, kept at 4.7-5.5 for good wetting. Alcohol and **wetting** agents in **founts** impart correct **surface tension** for adequate wetting of plate non-image areas. Biocides prevent bacteriological contamination. Mixing of **fount** concentrate with **water** and isopropanol is performed advantageously with metering systems. Merck's self-**contained water** test laboratory enables **monitoring fount pH**, conductivity, **surface tension**, specific gravity, hardness, biocide and antifoam. Constant **temperature** working is preferable. The German company offers the Acedin **fount** range, formulated for different **printing** processes, **dampening** systems, and **water** hardness.
Company Names: MERCK
Trade Names: ACEDIN
Geographic Locations: EUROPE; GERMANY; UNITED KINGDOM
Geographic Codes: EU; EZGER; EZUKM
Descriptors: ALCOHOL; ANTIFOAM; BACTERIOLOGICAL; BIOCIDE; COMPANY; CONDUCTIVITY; CONSTANT; CONTAMINATION; CONTROL; CORRECT; CORROSION; DAMPING; EMULSION; FAST; FILM - LAYER; **FOUNT - FOUNTAIN**; **FOUNTAIN**; GRAVITY; HANDLING; HARD; HARDNESS; INK; ISOPROPANOL; LABORATORY; LINTING; LOW; METERING; MIXING; MONITOR; NON-IMAGE; PERMIT; **PH**; PILING; PLATE ; **PRINTING**; RANGE; RAPID; RELEASE; REVIEW; SAFE; SALTS; SOLUTION; STABLE; START-UP; SURFACE; SYSTEM; TECHNOLOGICAL; **TEMPERATURE**; TENSION; TEST; THIN; TOLERANCE; UPDATE; WASTE; **WATER**; WETTING
Section Headings: Fountain Solutions (8415)

28/9/2 (Item 2 from file: 8) **Links**
Ei Compendex(R)

05176939 **E.I. No:** EIP98124488594
Title: Viscoelasticity of water/ink emulsions at low and high frequency

Author: Aurenty, P.; Palierne, J.F.; Gandini, A.
Corporate Source: Sun Chemical, Carlstadt, NJ, USA
Conference Title: Proceedings of the 1998 Technical Association of the Graphic Arts, TAGA
Conference Location: Chicago, IL, USA **Conference Date:** 19980426-19980429
E.I. Conference No.: 49328
Source: Proceedings of the Technical Association of the Graphic Arts, TAGA 1998. TAGA, Rochester, NY, USA. p 638-659
Publication Year: 1998
CODEN: 003154
Language: English
Document Type: CA; (Conference Article) **Treatment:** X; (Experimental)
Journal Announcement: 9901W4
Abstract: The deformation frequencies in a rolling Nip and during cavitation and filamentation correspond to 10**3-10**4 Hz. The **viscoelastic** properties of neat inks have been relatively well characterized only in the range of low frequencies, i.e., less than 50 Hz. On a conventional **printing** press, inks are emulsified with **fountain** solution and the **viscoelastic** parameters of the ensuing emulsions also constitute a relevant information. The rheology of both neat and emulsified inks in the high frequency domain is mostly unexplored because the conventional cone/plate rheometers are not reliable above 50 Hz. An experimental rheometer able to measure **viscoelastic** parameters in the range 0.1-10**4 Hz was therefore used to characterize model ink/water emulsions. Three distinct rheological responses were obtained at 25 degree C as a function of the frequency range applied, viz.: (i) at low frequencies (0.1-10 Hz), increasing the volume fraction phi of the emulsified droplets drastically enhanced the elastic modulus G prime of the emulsion; (ii) in the 10-100 Hz range, a relaxation plateau, corresponding to the shape relaxation of the droplets, was observed on the G prime modulus; and (iii) at the higher frequencies (100-10**4 Hz), both the elastic and **viscous moduli** decreased when **phi** was increased. These trends are discussed and related to the various events related to the history of the emulsified ink on a **printing** press. (Author abstract) 25 Refs.
Descriptors: *Emulsions; Ink; Water; Viscoelasticity; Relaxation processes; **Printing** presses; Rheology; Rheometers; Volume fraction; Elastic moduli
Identifiers: Droplet relaxation
Classification Codes:
745.1.1 (Printing Equipment)
804.2 (Inorganic Components); 931.2 (Physical Properties of Gases, Liquids & Solids); 931.1 (Mechanics); 745.1 (Printing); 943.3 (Special Purpose Instruments)
804 (Chemical Products); 931 (Applied Physics); 745 (Printing & Reprography); 943 (Mechanical & Miscellaneous Measuring Instruments)
80 (CHEMICAL ENGINEERING); 93 (ENGINEERING PHYSICS); 74 (OPTICAL TECHNOLOGY); 94 (INSTRUMENTS & MEASUREMENT)

28/9/4 (Item 1 from file: 95) **Links**
Fulltext available through: USPTO Full Text Retrieval Options
TEME-Technology & Management

01441108 20000804837
Web treatment - going solventless

(Flexodruckmaschine - Oberflaechenbehandlung von Polymersubstraten mittels Korona-Vorbehandlung)
Greig, S
Sherman Treaters, Thame/Oxon, GB
Coating, v33, n7, pp258-260,262-263 , 2000
Document type: journal article **Language:** English
Record type: Abstract
ISSN: 0590-8450

Abstract:
One of the problems facing waterborne inks is to ensure a high level of **surface tension** on films when a good adhesion must be obtained. A too low **surface tension** can be overcome by pretreating on the press with an additional piece of equipment such us corona pretreatment. Discussed are: **surface tension measured** in energy **units** called dynes/cm (mN/m) (dyne level of a material as its surface energy, the use of **wetting solutions** as method to measure the **surface tension** of a substrate **surface**, improving adhesion properties by raising the **surface tension** of plastics substrates), corona discharge treatment used for improving adhesion of various polymer substrates (corona generating, frequencies in the range of 9 kHz to 50 kHz, producing of large ionisation currents by breakdown of the air), reactive power systems (impedance matching, turned circuit, primary inductance of various taps on HT transformers, capitance via a capacitor bank, fine control, variable frequency of 10 kHz to 25 kHz), criteria to determine the generator power required; covered roll treater station (same watt density, and production of higher dyne levels than bare roll station); discharge mechanism and air gap (distance between backing roll and discharge electrode) as factors that affect the corona efficiency; ozone removal and ozone destruction (removing from the gas stream, levels of <0.1 ppm ozone in the working area).

Descriptors: PRESSWORKING--**PRINTING**; **PRINTING INKS**; **PRINTING** INK PROPERTIES; PIGMENTS; **SURFACE** PREPARATION; **SURFACE TENSION**; **SURFACE** ENERGY; CORONA DISCHARGES; CAPACITANCE; DIELECTRIC CONSTANT; POLYMERS; OZONE; ADHESIVES; FLEXOGRAPHIC PRESSES
Identifiers: Druckrolle; Korona-Behandlung; Druckfarbe; Haftfestigkeit

28/9/5 (Item 1 from file: 248) **Links**
PIRA

00385199 **Pira Accession Number:** 20008300
Title: LOW ALCOHOL OFFSET PRINTING WITH NEW CERAMIC ROLLERS IN THE DAMPING UNIT
Authors: Endisch M; Johner G
Source: Print (Zurich) no. 14-15, Apr. 1994, pp 34-39
Publication Year: 1994
Document Type: Journal Article
Language: German
Pira Subfiles: Printing and Publishing (PP); Printing Abstracts (PT)
Journal Announcement: 9407
Abstract: MAN Roland, a leading press manufacturer, and Coatex GmbH, have worked together to develop physical methods to reduce alcohol concentrations in **fountain** solutions. The construction of different types of damping units, the effect of isopropanol in contact damping **units**, and **measures** to reduce alcohol, are explained. Changes in the surface structure of rollers affect the **surface tension** of the aqueous **fountain** solutions. Hydrocer ceramic rollers were developed, and many tests have demonstrated their excellent wetting properties. Laboratory and field tests, and results, are described. Hydrocer damping rollers can produce both extremely thin and extremely thick **fountain** solution films, without tears, and ink-water equilibria are rapidly achieved. Reduction, and even elimination of IPA is possible with ceramic rollers on indirectly-damped **printing** rollers. (6 fig, 8 ref)
Company Names: COATEX; MAN-ROLAND DRUCKMASCHINEN
Trade Names: HYDROCER
Geographic Locations: EUROPE; GERMANY
Geographic Codes: EU; EZGER
Descriptors: CERAMIC ROLLER; DAMPING; **FOUNTAIN** SOLUTION; OFFSET - LITHO
Section Headings: Techniques (**Lithography**) (8331); **Fountain** Solutions (8415)

33/9/3 (Item 1 from file: 6) **Links**
NTIS
0516061 **NTIS Accession Number:** N75-27391/2/XAB

Theoretical and Experimental Studies on the Two-Way Effects of Process Variables in the Offset Process and Their Affects on Print Quality in Process Optimization Theoretische und Experimentelle Untersuchungen ueber die Gegenseitige Beeinflussung der Prozessvariablen des Offsetverfahrens und Deren Auswirkung Auf die Druckqualitaet als Zielgroesse des Prozesses

(**Ph**.D. Thesis)

Decker, P.
Technische Universitaet, Munich (West Germany).

27 Jun 74 203p
Journal Announcement: GRAI7522; STAR1318
Language in German. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A10/MF A01

Technical and physical aspects of the **offset printing** process are studied for their interaction parameters in process optimization. Emphasis is placed on the rheological properties of ink **emulsions**, effects of press **dampening**, color intensity of **prints** and tone rendering, as well as **temperature** effects on ink layer thickness, ink **viscosity** and wetting **agent** volume.

Descriptors: *Optimization; ***Printing**; *Quality control; *Wetting; Inks; **Lithography**; Moisture; Production engineering; **Temperature** effects
Identifiers: NTISNASA
Section Headings: 82B (Photography and Recording Devices--Photographic Techniques and Equipment)

33/9/5 (Item 2 from file: 8) **Links**
Ei Compendex(R)

00491373 **E.I. Monthly No:** EI7511076268 **E.I. Yearly No:** EI75060959
Title: SURFACE ENERGETICS ANALYSIS OF LITHOGRAPHY.

Author: Kaelble, David H.; Dynes, Paul J.; Pav, Darrell
Corporate Source: Rockwell Int, Thousand Oaks, Calif
Source: American Chemical Society, Division of Organic Coatings and Plastics Chemistry, Preprints v 35 n 2 1975, for Meet, Chicago, Ill, Aug 25-29 1975 p 139-145
Publication Year: 1975
CODEN: ACOCAO **ISSN:** 0096-512X
Language: ENGLISH
Journal Announcement: 7511
Abstract: This paper discusses the surface energy analysis of **lithography** by isolating the (London-d) dispersion and (Keesom-p) polar components of **ambient surface tension** for **lithographic** plates, roll surfaces, **printing** ink, and **fountain** solutions. These data are then utilized in an extended surface-energetics (S-E) and fracture-mechanics (F-M) model which predicts ink/**fountain** solution interaction on the **lithographic** plate surface. The analysis indicates that ink will bond to image areas and **fountain** solution to non-image areas of the **lithographic** plate when the control condition (BETA //2)//m//i//n LESS THAN EQUIVALENT TO BETA LESS THAN EQUIVALENT TO (BETA //2)//m//a//x, which defines upper and lower bounds for the polar part of **fountain** solution **surface tension**, is maintained. For the **fountain** solution studies **pH** and BETA //2 = (GAMMA //L//V**p)** 1/2 correlate so that **pH** measurement and control of **fountain** solution concentration can be applied to aid in the control ink-image formation. The model applied to this discussion is specifically addressed to defining bonding and failure criteria at adsorption interfaces. The general analysis of adhesion also describes the kinetic aspects of both adsorption and interdiffusion bonding in which case primary valence structure extends through the interface. 19 refs.

Descriptors: ***PRINTING** PLATES--*Plastic; SURFACE PHENOMENA--Physical Chemistry; **LIQUIDS--Surface Tension**; MATHEMATICAL TECHNIQUES
Identifiers: LITHOGRAPHY; SURFACE ENERGETICS
Classification Codes:
745 (Printing & Reprography); 801 (Chemical Analysis & Physical Chemistry); 817 (Plastics, Products & Applications); 921 (Applied Mathematics); 931 (Applied Physics)
74 (OPTICAL TECHNOLOGY); 80 (CHEMICAL ENGINEERING); 81 (CHEMICAL PROCESS INDUSTRIES); 92 (ENGINEERING MATHEMATICS); 93 (ENGINEERING PHYSICS)

33/9/8 (Item 2 from file: 248) **Links**

Fulltext available through: USPTO Full Text Retrieval Options

PIRA

00475853 **Pira Accession Number:** 20077929

Title: Effect of printing ink binder composition on emulsification of fountain solutions

Authors: Wickman M; Hallstensson K; Strom G

Source: J. Pulp Pap. Sci. vol. 23, no. 4, Apr. 1997, pp J167-J173 (C, K, P, S)

ISSN: 0317-882X

Publication Year: 1997

Document Type: Journal Article

Language: English

Pira Subfiles: Paperbase (PB); Printing and Publishing (PP); Printing Abstracts (PT)

Journal Announcement: 9707

Abstract: Research was undertaken by the Swedish Institute for Surface Chemistry on the influence of alkyd resin properties on ink-**fountain** solution relationships as regards interfacial tension and the droplet size of **water** in oil emulsions. The interfacial tension was calculated at 20 deg C using a pendant drop measuring instrument and the **water** droplet size was measured with a laser diffraction instrument. It was found that the polarity of the alkyd resins directly influenced the interfacial tension between the **fountain** solution and the **printing** ink oil and alkyd resins. Interfacial tension decreased when the alkyd resins had high **acidic** and hydroxylic values. Alkyd resins with high **acidic** and hydroxylic values should be used for stable **lithographic** emulsions. The droplet size is determined by the properties of the alkyd resins and not the **surface tension** of the **water** stage. Alkyd resins stabilised **water** in oil emulsions during **offset printing**. (9 fig, 2 tab, 24 ref)

Descriptors: BINDER; DIMENSION; DROPLET; EMULSIFICATION; **FOUNTAIN** SOLUTION; **HEATSET** INK; OIL; POLYALKYD; **PRINTING** INK; **SURFACE TENSION**

Section Headings: Paper and board **printing** technology (1259); Drying and Curing (8416)

33/9/9 (Item 3 from file: 248) **Links**
Fulltext available through: USPTO Full Text Retrieval Options
PIRA

00451951 **Pira Accession Number:** 20056055
Title: On color, on time
Authors: Williams C
Source: Package Print. Converting vol. 43, no. 4, Apr. 1996, pp 52-53, 56, 59
ISSN: 0163-9234
Publication Year: 1996
Document Type: Journal Article
Language: English
Pira Subfiles: Printing and Publishing (PP); Printing Abstracts (PT)
Journal Announcement: 9608
Abstract: Measuring ink **viscosity** with efflux cups is inadequate. Ink **viscosity** changes during its journey on the press; this can affect colour **consistency** and intensity, ink transfer and drying, and waste. Ink **viscosity** varies with **temperature**, and is impacted by change in **fountain** solution **temperature**. Efflux cups ignore **temperature** variations. Ink colour concentration control takes **temperature** into account. It monitors ink **temperature**, then compensating **viscosity** to maintain colour **consistency**. It can be automatically self-cleaning, and control **pH** of **water** based inks. Single-station controllers are installed at each **printing** deck, or at a centralised location; alternatively a computer can control several presses. Closed-loop systems, with spectrophotometers monitor and control webs. (3 fig)
Geographic Locations: North America; USA
Geographic Codes: NA; NAUSA
Descriptors: INK; MEASUREMENT; TECHNOLOGY TRENDS; **VISCOSITY**
Section Headings: Ink Properties (8413)

33/9/11 (Item 5 from file: 248) Links

Fulltext available through: USPTO Full Text Retrieval Options

PIRA

00403643 **Pira Accession Number:** 20025664

Title: PRINTING WITHOUT ALCOHOL

Authors: Sander H

Source: Druckspiegel vol. 50, no. 2, Feb. 1995, pp 153-155

ISSN: 0012-6500

Publication Year: 1995

Document Type: Journal Article

Language: German

Pira Subfiles: Printing and Publishing (PP); Printing Abstracts (PT)

Journal Announcement: 9506

Abstract: Conventional damping units can work without alcohol, but ink/**water** equilibria are difficult to maintain, and fabric coated damping rollers become clogged with ink. Film damping units were developed to overcome these problems, but a 5 to 15% concentration of alcohol is needed to lower the **surface tension** of the **fountain** solution to ensure even films on the smooth rubber rollers. A large **heat**-set rotary press can use 100l alcohol daily. Advantages and disadvantages of alcohol use are discussed and the mechanism of **water** transport in **damping** units, and its relationship to **viscosity** explained. The physical structure of **water**, and **fountain** solution **temperature** and **pH** also affect transport efficiency. DS Druckerei Service GmbH has worked successfully for two years, using alcohol substitutes, in several sectors, especially continuous stationery **printing**. Results are described. Alcohol substitutes offer several advantages, including lower ink consumption and lower costs. (2 fig, 2 tab, 5 ref)

Descriptors: ALCOHOL; DAMPING; **FOUNTAIN** SOLUTION

Section Headings: Inking and Damping Systems (8414)

33/9/12 (Item 6 from file: 248) **Links**
Fulltext available through: USPTO Full Text Retrieval Options
PIRA

00376933 **Pira Accession Number:** 10383440 **Pira Abstract Numbers:** 08-94-PT00624
Title: INKS OF THE ENVELOPE WORLD
Authors: Dammrich E
Source: Flexo vol. 18, no. 10, Oct. 1993, pp 12-13
ISSN: 0734-6980
Publication Year: 1993
Document Type: Journal Article
Language: English
Pira Subfiles: Printing and Publishing (PP); Printing Abstracts (PT)
Journal Announcement: 9402
Abstract: Traditionally envelope **printers** have used **lithography**; or flexography for Just-In-Time operation. Presses were designed for easily rewetting solvent inks. **Water**-based inks are now used, requiring changing pressroom equipment and habits. They set slowly, causing more dot gain and strike-thorough, and make uncoated paper curl. Their resins are only **water**-soluble in an **alkaline pH**, obtained by adding ammonia and amines. **Water** must be added to adjust **viscosity**. An ink **fountain** cover, reducing evaporation, helps maintain ink stability. Dry ink on press rollers may not rewet; newer presses maintain roller movement to prevent this, older machines requiring modification. Drying should provide little **heat** and plenty of air flow. Close cooperation with **water**-based ink suppliers is advantageous.
Geographic Locations: NORTH AMERICA; USA
Geographic Codes: NA; NAUSA
Descriptors: ALKALINE; AMINE; AMMONIA; CURL; DOT GAIN; DRYING; ENVELOPE; EVAPORATION; FLEXOGRAPHY; **FOUNTAIN**; GUIDELINE; INK; JUST-IN-TIME; **LITHOGRAPHY**; MODIFICATION; PAPER; **PH**; PRESS; PRESSROOM; **PRINTER**; RESIN; REWETTING; SOLVENT; SUPPLIER; UNCOATED; **VISCOSITY**; **WATER**; **WATER**-BASED; **WATER**-BASED INK; **WATER**-SOLUBLE
Section Headings: Ink Properties (8413); Techniques (**Lithography**) (8331); Business Forms (8611)

33/9/15 (Item 9 from file: 248) **Links**
PIRA

00212456 **Pira Accession Number:** 9526282 **Pira Abstract Numbers:** 02-90-03884
Title: CONTROLLING BEHAVIOURAL CHARACTERISTICS OF NEWSINKS
Authors: Norgate C D
Source: Newspap. Tech. July-Aug. 1990, pp 20, 22
ISSN: 0019-333X
Publication Year: 1990
Document Type: Journal Article
Language: English
Pira Subfiles: Printing Abstracts (PR)
Journal Announcement: 9011
Abstract: The newspaper **printer** needs ink that offers **printability**, productivity, rub resistance and cost benefit. He should discuss his halftone, dot sharpness, setting, trapping and density targets with the inkmaker. Keyless inking systems provide improved productivity over conventional ones. Ink formulation is affected by press speed and **print** run length, feed system and setting time. Stable ink and **water** emulsions must be formed rapidly, the ink must have good flow and **viscosity**, be responsive to **fount** changes, not cause tinting or scumming in non-image areas, and transfer well. Modern high-speed presses generate **heat**, necessitating careful formulation to avoid misting. **Water** hardness, **pH**, and conductivity affect ink runnability. Newsprint surface, porosity, and surface fibre strength vary setting and rub resistance levels. Plate and blanket changes influence ink behaviour. **Printers** and suppliers must work together, and inkmakers must employ quality control.
Geographic Locations: EUROPE; UNITED KINGDOM
Geographic Codes: EU; EZUKM
Descriptors: BEHAVIOUR; BENEFIT; BLANKET; CONDUCTIVITY; CONTROL; COST; DENSITY; DOT; EMULSION; FEED; FIBRE; FLOW; FORMING; FORMULATION; **FOUNT - FOUNTAIN**; HALFTONE; HARDNESS; **HEAT**; HIGH-SPEED; INK; INK FORMULATION; INK MANUFACTURE; KEYLESS INKING; LENGTH; MISTING; NEWSINK; NEWSPAPER; NEWSPRINT; NON-IMAGE; **PH**; PLATE; POROSITY; PRESS; **PRINT**; **PRINTABILITY**; **PRINTER**; PRODUCTIVITY; QUALITY CONTROL; RESISTANCE; RUB; RUB RESISTANCE; RUN; RUNNABILITY; SCUMMING; SHARPNESS; SPEED; STABLE; STRENGTH; SUPPLIER; SURFACE; SYSTEM; TIME; TINTING; TRANSFER; TRAPPING; **VISCOSITY**; **WATER**
Section Headings: Inks inking and drying systems (2360)

10/523699

33/9/16 (Item 10 from file: 248) **Links**

Fulltext available through: USPTO Full Text Retrieval Options

PIRA

00172874 **Pira Accession Number:** 8126802 **Pira Abstract Numbers:** 02-88-01998

Title: BASIC CHANGES IN INK FORMULATION

Authors: Funk E T

Source: Am. Ink Maker vol. 66, no. 3, Mar. 1988, pp 52, 54

ISSN: 0002-8916

Publication Year: 1988

Document Type: Journal Article

Language: English

Pira Subfiles: Printing Abstracts (PR)

Journal Announcement: 8807

Abstract: Heatset web **offset presses** will achieve speeds over 2,500 feet per minute by the end of the 1980s although efficiency will also be measured in terms of productivity and waste reduction. Productivity can be defined as excellent press runnability and ink **printability** coupled with minimum downtime. Ink performance is affected by paper, **fountain** solution, plant **water**, solvent, plates, blankets, rollers etc. Coated paper applications have grown considerably but not apace with the growth of insert **printing** on uncoated paper - 33% from 1981- 1986. The characteristics of coated paper which demand attention concern absorptivity, roughness, surface strength, brightness, wet strength, caliper, **pH**, conductivity and sheet formation. The other variables which must be considered are **dampening** system, **fountain solution**, conductivity and, most importantly, ink rheology, notably tack, **viscosity** and yield value.

Geographic Locations: NORTH AMERICA; USA

Geographic Codes: NA; NAUSA

Descriptors: ABSORBENCY; APPLICATIONS; BASIC; BLANKET; BRIGHTNESS; CALIPER; COATED; CONDUCTIVITY; COUPLED; DAMPING; DEMAND; DOWNTIME; EFFICIENCY; FORMATION; **FOUNTAIN**; **FOUNTAIN** SOLUTION; GROWN; GROWTH; **HEATSET**; INK; INK FORMULATION; INSERT; MINIMUM; PAPER; **PH**; PLANT; PLATE; PRESS; **PRINTABILITY**; **PRINTING**; PRODUCTIVITY; RHEOLOGY; ROLLER ; ROUGHNESS; RUNNABILITY; SHEET; SOLUTION; SOLVENT; STRENGTH; SURFACE; SYSTEM; TACK; UNCOATED; **VISCOSITY**; WASTE; **WATER**; WEB OFFSET; WET; YIELD

Section Headings: Inks inking and drying systems (2360)